BURNS RENDERING PLANT - BRANDON

REPORT ON THE REVIEW OF THE ENVIRONMENT DEPARTMENT LICENCE REGULATING THE OPERATION OF AND EMISSIONS FROM THE PLANT

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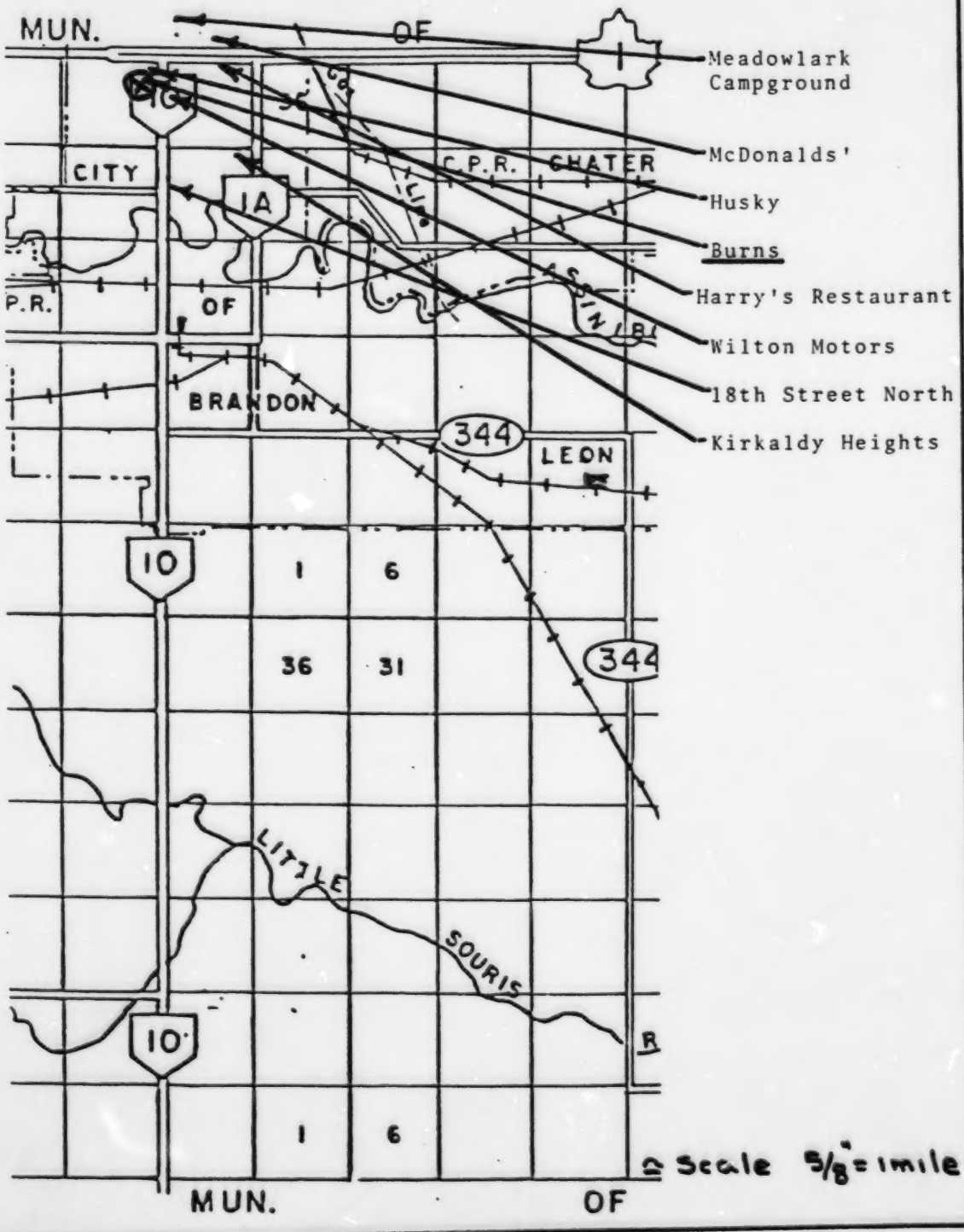
INTRODUCTION

As a result of a number of complaints from citizens of Brandon regarding strong odors emanating from the Burns Foods Ltd. rendering plant located near the junction of the Trans-Canada Highway (TCH) and Provincial Trunk Highway (PTH) No. 10 (figure 1), the Honourable Ed Connery, Minister of Environment and Workplace Safety and Health, on August 8, 1988, requested that the Clean Environment Commission convene a hearing in Brandon to review the limits, terms and conditions of Environment Act Licence No. 331 regulating the operation of and emissions from this plant. The Commission was requested to report after the hearing with recommendations on possible revisions to the licence to address the concerns of the citizens.

Arrangements were made to hold the hearing in Brandon on September 7, 1988. Parties to the hearing, including all citizens whose complaints had been recorded, were notified of the hearing by letter. The hearing was advertised in the August 25, 1988 edition of the Brandon Sun and the Winnipeg Free Press.

SITE PLAN - BURNS RENDERING OPERATION

FIGURE 1



BACKGROUND

The Burns rendering plant was built in 1965 near the junction of the TCH and PTH 10 (otherwise known as 18th Street North) in the Rural Municipality of Cornwallis by Pool Packers to complement their abattoir and meat packing plant located on 10th Street North in Brandon. In addition to processing packing plant wastes, the rendering plant was strategically located to handle dead animal disposal from farm livestock operations ranging from the U.S. border to Minitonas and Portage la Prairie to eastern Saskatchewan.

The plant location was zoned industrial. In a memorandum submitted in evidence at a Clean Environment Commission hearing on February 19, 1973 the Environment Management Division, Regional Supervisor for the area reported that "This plant was located in its present location after lengthy discussion with the Environmental Sanitation Section of the Department of Health, who advised Dr. M. Matheson, part time Medical Officer of Health that this location was acceptable". Dr. McNeill, Medical Officer of Health reported at this hearing that shortly thereafter there were numerous complaints which continued over a period of two to three years.

It should be noted that there was little development in the vicinity of the rendering plant during the early years of its operation. Most of the present surrounding business developments were established at about the same time or after the rendering operation was built. The TCH Brandon diversion was constructed in the late fifties, while the 18th Street North Assiniboine River crossing was constructed in 1960. The 18th Street CPR overpass was completed in 1967. The land in question was annexed by the City of Brandon from the Rural Municipality of Cornwallis in the early 1970's.

Burns Foods Ltd. took over the operation of the rendering plant in 1969 and began a major program of clean-up and restoration with additional expenditures reported at close to $50,000.

There are a number of odor sources associated with the Burns Rendering Operation. Dead animals and offal are received. The animals are

skinned; the hides preserved and stored for shipment elsewhere; bones are ground and the tissue and the blood cooked. Meal from dried blood is packaged and stored as animal feed. The solids from cooking are ground and stored in bulk and subsequently shipped as animal feed. The liquid portion of the by-product is tallow which is stored before shipment. While odor is associated with handling of offal and the dead animals, the principal odor originates from the cooking of both the tissue and the blood. Odors also occur when the cooker is dumped. Also, there is likely to be some odor from the handling of the finished product.

Wastewater treatment lagoons were originally employed for treatment of liquid waste. Both wash water and condensate from the cooking operation were discharged to the lagoons. Condensate cooling water was returned from the lagoons for reuse. A build-up of both scum and sediments in the lagoons created odors.

In April 1969, at the request of West Man Development Corporation, the Department of Industry and Commerce undertook a study into the odor problems at the Brandon operation and made certain recommendations. The areas receiving attention in the plant study were operating procedures, housekeeping and maintenance, cooker vents and the lagoons. Not all of the recommendations were acted upon, but as part of the expenditure by Burns, as noted earlier, the lagoons were cleaned up and restored, a grease and suspended solids flotation unit was placed on the wash water waste line, and aeration equipment was installed in the first cell of the lagoon system.

On October 7, 1972, Burns Foods Ltd. registered for a licence under the Clean Environment Act. Following this registration a hearing was held in Brandon by the Clean Environment Commission on February 19, 1973. In attendance were representatives of Burns, the City of Brandon, the Rural Municipality of Cornwallis, the Department of Health, the Environmental Management Division and citizens of Brandon most of whom lived or operated businesses close to the rendering operation.

In its presentation, the Environmental Management Division representative noted a number of concerns with aspects of the operation that could contribute to the odor problem being experienced in the neighborhood, including: an accumulation of raw materials waiting to be processed; liquid condensate leaking from the condensate pot; blood drier emissions being directed to the atmosphere without treatment, and overflow of effluent from the third cell of the lagoon to local drains. This report also noted that problems were being experienced in the incineration of gases from the rendering operation, although an inadequately sized burner had been replaced with one of larger capacity. The report concluded that excessive amounts of odorous gases and vapors were being emitted from the operation.

The Medical Officer of Health (MOH) expressed his satisfaction with the progress in emission control that had been made by Burns over the previous several years. He noted that only one bona fide complaint had been received in the past 2 years.

The City Engineer pointed out that the Brandon sewage collection system would be extended past the rendering plant location during 1973. This would allow the rendering plant to discharge liquid waste directly to the City sewage collection system. The Burns representative pointed out some difficulty with such a proposal. He stated that the plant's wash-up wastes likely caused the odor problem in the lagoon operations and therefore should be discharged to the Brandon sewage system. Due to a limit on the capacity of the plant's water supply, obtained from wells, however, condenser cooling water should continue to be discharged to the lagoons for recycling. The Brandon City Council urged the Commission to consider the position of both the City Engineer, with respect to the possible relief provided by the new sewer extension, and the position of the Medical Health Officer respecting progress that had been made by Burns.

Representatives of several businesses located near the rendering operation expressed strong concerns about the odors. These businesses had been established subsequent to the rendering operation. Mention was also made of a housing subdivision, known as Kirkaldy Heights, located approximately

1 1/2 to 2 km south east of the plant. A start was being made on the construction of attractive homes in this area.

The Commission's order was issued on December 13, 1973, with the main stipulations requiring the installation of equipment to reduce odors and the imposition of an odor limit of 7 units when sampled at any point off the plant premises. The Company was also required to discontinue the plant lagoon system operation within six months of the construction of the city sewage collection system along 18th Street to the plant location.

This order was appealed by the Company and the Environment Minister referred the matter back to the Commission for its further advice and recommendations. The basis of the appeal was that the Company wished to make clear its stated need to maintain the lagoons for the discharge and subsequent recycling of condensate cooling water. The Company also confirmed that proprietary air pollution control equipment, designed for rendering plants, consisting of a venturi scrubber followed by a packed tower in which chemicals could be used to oxidize the odorous compounds, was on order from a specialty company and would be installed within the six month period identified in the Commission's order.

The Company's request was granted with the following qualifications incorporated into clause 6 of as varied licence No. 331A, issued on September 20, 1974.

6. The applicant shall ensure that:

(a) within six months from the date that the municipal sewage collection system is available, the said operation is connected to this system and the on-site lagoon system for the purpose of waste treatment is restricted to the following processes:

(a) (i) a biological waste water treatment system for plant effluent, with final disposal of surplus to the municipal sewage system, and

(ii) a reservoir for the storage, cooling and recycling of cooling water,

(b) sewage pretreatment facilities shall be provided as may be required by the City of Brandon.

In late 1975 and early 1976, the air pollution control equipment was installed and a sewer service connected to the Brandon sewage collection system. From the outset of the varied order, but particularly from 1982 on, the Environmental Management Division recorded complaints of odors and air pollution control equipment failures; however, in no monitored case, was the odor limit, as specified in licence No. 331A, exceeded. On some monitored occasions, there was stronger odor reported to be emanating from the plant lagoons than from the rendering plant itself.

THE CURRENT HEARING

As noted previously, the hearing was called by the Minister of Environment in response to numerous complaints from the residents of Brandon. From September 1987 to July 1988, the Environmental Management Division recorded twenty complaints. The higher frequency of complaints corresponded with the period when the Burns rendering plant began processing offal and blood from the new Springhill Farms Hog Processing Plant at Neepawa.

Among those present at the hearing were representatives of Burns Foods Ltd; the City of Brandon; the Environment, Health, and Agriculture Departments; the Brandon Chamber of Commerce; the Brandon Economic Development Board; and citizens of Brandon. Several of the citizens were representatives of businesses operating in the neighborhood of the plant. In addition the M.L.A. for Brandon East, Mr. Len Evans, participated actively in the question periods which followed each presentation.

The Burn's Foods Ltd. Presentation

The Company was represented at the hearing by Mr. Ronald Faithfull, President of the Meat Division; Mr. Harvey Toews, Director of Beef Operations; and Mr. Bob Yanko, Director of Operations.

The Company representatives stated that animal viscera, and other non edible matter including bones and blood, are meat packing by-products having some value and not uneconomic waste materials. It is essential that this material be disposed of in a hygienically and socially acceptable manner. The normal practise is to render such materials into tallow and animal feed meal.

As has been noted, the Brandon rendering plant was built in 1965 by Pool Packers, and purchased by Burns in 1968. Until the fall of 1981 it mainly processed blood and viscera from the Burn's packing plant in Brandon as well as dead animals from farm livestock operations and feed lots in western Manitoba. In the fall of 1987, however, the input to the rendering plant was

substantially increased when Burn's contracted to render viscera from Springhill Farms hog processing plant at Neepawa. As a result of this added load the volume throughput of the plant increased from 60 percent to 100 percent of plant capacity. This load is not expected to increase significantly beyond this level as Springhill was reported to be operating at 80 percent of capacity and there are currently no expansion plans for the Brandon meat packing operation. The rendering plant is operated 24 hours per day during week days, normally shutting down at 8 a.m. on Saturday. If there is material remaining to be rendered, the operation may continue throughout part of Saturday.

With the advent of the increased volume of material from Neepawa, a decision was made to fund improvements in the operation. In total, $250,000 was allocated for plant upgrading. The planned upgrading was accelerated in July/August, 1988, because of a failure of the packed tower scrubber on July 7th and 8th which caused the emission of very strong odors and many complaints. The purpose of the upgrading was to achieve a reduction of odors to an acceptable level and the Burns representative felt that this had been achieved at the time of the hearing.

In the Company's opinion, objectionable odors from the operation cannot be completely eliminated. The Burn's representative expressed the belief that the Company had not, in the past, paid sufficient attention to the concerns and a complaints of the citizens and businesses in the vicinity of the operation, partly because the environmental limit for odor in the License (less than 7 odor units) was consistently complied with.

Measures taken by the Company as part of the recent upgrading included: skimming and emptying the treatment lagoon; diverting all waste water to the Brandon sewage collection system (the lagoons, in the past, have contributed to the odor); adding to the ventilation equipment to ensure that the building is under negative pressure; improving air movement in the plant; improving the operation and maintenance of the scrubber (scrubber maintenance is undertaken on weekends and includes changing the water, cleaning the packing and filters as needed, adding hypochlorite and assuring that the pH is

properly maintained); adding an exhaust hood over the blood tank with discharge to the scrubber and a clean up of the property, including painting.

The loading of the finished products (tallow and meal) for delivery to customers entails some odor emission, which has not been controlled. Additional planned improvements, which remain to be done, include the pre-treatment of liquid wastes discharged to the sewer and the addition of a centrifuge to dewater blood prior to cooking.

At the present time, apart from a major breakdown that can not be anticipated, back-up equipment is available to minimize the impact of a breakdown of the air pollution control equipment.

In the Company's view, the existing air pollution control equipment is "state of the art" with sufficient capacity to ensure that all of the odor bearing air is exhausted through the scrubber.

Even after the upgrading and the maintenance program, it was the opinion of the Company representative that a residential odor limit of 2 units could not be met at the plant property line on a consistent basis. In response to a question, the Company representative noted that re-location of the rendering plant had not been seriously considered. An off-the-cuff estimate of the cost of a re-location was stated to be in the order of 3 to 4 million dollars.

The Brandon Economic Development Board Position

Two representatives of the Brandon Economic Development Board, Mr. Reg Forbes and Mr. Arnold Grambo, made presentations representing, respectively, the industrial and tourism interests of the Board.

The representative for industry, Mr. Forbes sympathized with the neighbors when the odors were severe; however, he noted that most of the nearby businesses were established after the rendering plant. Closure of the

rendering plant would have serious implications for not only Brandon but all of western Manitoba. Aside from a staff of 200 at the Brandon meat packing plant with a payroll of $5 to 6 million dollars annually, Burns purchases some $75,000,000 worth of livestock from Manitoba producers. The Springhill operation might be compelled to close if the Brandon rendering plant were closed. Processing of agricultural products is on the top of the economic development list and such industries are seldom without odors. He stated that if the benefits of such industries are valued and enjoyed it may be necessary to tolerate some degree of unpleasant odor. Mr. Forbes also expressed the opinion that Burns should be given time to make the further technological improvements necessary to reduce the present objectionable odor level.

In the view of the representative speaking for tourism, Mr. Grambo, the odor from the rendering operation has been intolerable at times and this is unacceptable for the business operations located on top of the north hill in proximity to the rendering plant, many of whom cater to the tourist industry. Burns had indicated to Brandon City Council in early August that the rendering operation could be "virtually odor free" and, therefore, the industry should be given only sufficient time to undertake the plant improvements necessary to accomplish this. The existence of a rendering plant is necessary for the benefit of all of western Manitoba and, therefore, Mr. Grambo felt the Provincial government should be prepared to share in some of the costs of improvement. Mr. Grambo expressed the belief that technology exists to eliminate odors or reduce them to an acceptable level and the Company should be given time and help to achieve this. In his opinion, relocation of the plant would be too costly an undertaking.

The City of Brandon Position

The City of Brandon was represented by Mayor Kenneth Burgess, City Manager Earl Backman, and City Engineer John Slevinsky.

The Mayor spoke first on behalf of the City. He noted that the most serious complaints concerning odor from the operation began in the fall of 1987. The situation climaxed on July 7-9th of 1988 when the air pollution

control equipment failed during a hot interval in summer. Unacceptable odors continued and in early August, representatives of the City met with Burns. The City agreed to permit the lagoon contents to be drained to the Brandon sewage collection system at that time and to permit all plant liquid effluent to discharge directly to the City sewage collection system thereafter, by-passing the Company's lagoons entirely.

The Mayor expressed surprise that none of the neighboring business operations appeared to be prepared to concede that there were any improvements in the odor emissions since the major undertaking of Burns to ameliorate the odor emissions at a considerable cost.

The Mayor and Council felt that the odor limit should be reduced to 2 odor units ("if this is reasonable").

In terms of zoning, the rendering operation is a conditional use and is located on land zoned C3. Currently there is a planning district which includes the city, and the Rural Municipalities of Elton and Cornwallis.

In response to a question, the Mayor stated that Council had examined the possibility of an abatement project under the Clean Environment Act as a means of relieving the problem by re-locating the industry with costs shared by the industry, the city and the Province. He reported that "they haven't gotten very far with it".

The City Engineer reported on the dewatering of the rendering plant lagoon and the subsequent discharge of all of the plant effluent to the Brandon sewage collection system. Brandon test results have shown that the plant effluent has ranged from a biochemical oxygen demand (B.O.D.) of 1200 to 1800 mg/l. He believed that the additional loading from the plant would not upset the City's wastewater treatment plant operation. It was also his view that in the past the rendering plant lagoons have been a significant odor source. The on-going development and design of the new waste treatment facility for the City would have to take into account the additional organic load from the rendering plant wastewater if the new discharge practice continues.

The Chamber of Commerce Position

Odors generated by the rendering plant are having a negative impact on businesses in the vicinity of the plant and in the residential development located on the North Hill of the city. Some of the businesses are tourist related and the odor is turning tourists away. In the long term the north end of 18th Street is an appropriate location for new commerical enterprises and therefore not an appropriate location for a rendering plant. Economic development in the area will suffer. The rendering plant should be re-located with financial assistance from the various levels of government. Notwithstanding any improvements that Burns have made to the operation, the Chamber of Commerce view remains that the rendering plant should be relocated.

Citizen and Business Operator Concerns

There were concerns expressed from several categories of neighbors — nearby businesses operators and residents located in the Kirkaldy subdivision some 1 1/2 to 2 kms southeast of the rendering plant. The business operations are located north, east and south of the plant at a distance of 200 to 1500 metres.

Over half of the businesses were tourist related — motels, restaurants, and a campground. Tourism will decline if odors persist. One businessman spoke of the loss of tour bus business at his restaurant. There were several complaints from sales and service type businesses. It was noted that the odors from the rendering operation were objectionable to customers and unacceptable to workers. One automotive sales establishment owner stated that extreme odors had actually driven potential customers from his property after they had initially stopped to do business. Some of the respondents felt that there had been some improvement in the odor from the rendering operation following the completion of most of plant improvements. Others felt that there had been little or no improvement during the past several months.

Some of the complainants were the same as those heard at the earlier hearings of the Commission in the 1970's. Although there was no complete record of complaints, there was an impression that some of the complainants had been voicing their concerns with regularity over the years. One of the business people, who had established in the area about the same time as the rendering operation, stated that there had been a problem with varying odor strength over the years but that the past year had been exceptionally bad and reminiscent of early years. One of the restauranteurs noted that conditions around the plant in early summer had been deplorable with evidence of viscera lying on the ground. All of the complainants wanted the limits tightened but most believed that plant relocation is both desirable and necessary to remove the odor problem.

Springhill Farms - Neepawa Presentation

Mr. Bill Teichroew represented Springhill Farms.

Springhill Farms is a large new hog processing operation located at Neepawa which commenced operation in the fall of 1986. They have been sending viscera and other animal waste from a kill averaging 1800 to 2000 animals per day to the Brandon rendering plant since the Fall of 1987. At the outset of the operation this material was sent to Winnipeg but there is an economic advantage in utilizing the Brandon facility. If the Brandon rendering facility were closed there would be an economic disadvantage which could adversely effect the economic viability of the Springhill operation.

The City of Portage La Prairie Position

Mr. Don Spikula spoke on behalf of the City of Portage la Prairie.

The concern of Portage la Prairie has to do with the possible adverse impact on the Assiniboine River water quality resulting from any change in effluent quality originating from the City of Brandon. In response, Brandon's

City Engineer noted that the city would have to continue to meet the limits, terms, and conditions of an Environment Department licence notwithstanding the acceptance of plant effluent from the Burns operation. The City of Brandon is currently upgrading its wastewater treatment facility and the organic loading from the Burns operation would be given recognition in this process.

The Environment Department Presentation

The Environment Department was represented by Mr. Ken Wait, an Environmental Officer with Environmental Control Programs.

The Department's representative noted that there had been 20 complaints about odor for the period beginning with the fall of 1987 and ending in mid-July, 1988. The complaints increased when viscera from Springhill Farms was introduced to the Brandon rendering operation.

Whenever odor surveys have been conducted, the odor levels have been less than the 7 odor units allowed by the current Environment Department license. As a matter of record, the levels are generally less than 3 odor units. Odor measurements were not taken during the breakdown of the air pollution control equipment July 7-9th, 1988. Odor monitoring 3 days subsequent to the breakdown was at a level of 3 odor units. The odor level on September 6th, the day before the hearing, was 1.4 odor units. He also noted that during odor surveys taken at the rendering plant in the past, lagoon odors were often significant and this would likely continue if the lagoon was reactivated to its former use.

Mr. Wait reported that 3 to 4 complaints were received annually concerning meat packing and processing operations in Winnipeg. Some of these Winnipeg plants contain rendering operations. The odor level prescribed in connection with these operations is 7 odor units.

The conclusion of the Departmental representative was that, because of its offensive nature, any rendering odor is unacceptable to the general public in either a residential or a commercial area; that an odor level limit of 7 odor units is certainly unacceptable; that an odor level limit of 3 odor units, which the Burns Brandon plant apparently might now meet on a consistent basis, would not be acceptable to those who complain; that even an odor level of 2 units, which the plant could not consistently meet, would likewise not be acceptable. He also stated his opinion that the air pollution control equipment installed and utilized at the plant is properly sized and is the same standard of equipment commonly used in other rendering plant operations and beyond this, to his knowledge, the air pollution control equipment is "state of the art". As an expert in the field of air pollution, he was not aware of a better available alternative air pollution control technology that would be likely to render the odors acceptable to the neighborhood.

In response to a question, he stated that a higher stack on the exhaust discharge from the plant could result in odors being conveyed to the built up part of the City in and adjacent to the Assiniboine River valley during meteorological thermal inversions, which would only further aggravate odor problems.

The Manitoba Health Department Presentation

The Manitoba Department of Health was represented by Dr. N.S. Rihal of the Environmental Health Branch. Dr. Rihal noted that rendering of inedible meat by-products had always been considered an "Offensive Trade". He outlined the character of odors and their effect on the olefactory senses. In his view, the odor limits should be reduced, regular monitoring should take place and the licence should be reviewed again if unacceptable odors persist.

The Manitoba Agriculture Department Presentation

Dr. R.J. Richmond, Chief of the Beef Section of the Animal Industry Branch expressed concern about the infrastructure of the red meat manufacturing business since it is Manitoba's number one manufacturing business in terms of capital income. Rendering plants are an integral part of the red meat business. Both Burns and Springhill meat packing plants would be impacted if rendering in Brandon was not viable and the adverse effect would move down the line to production and supply operations.

THE COMMISSION'S CONCLUSIONS

There is no question as to the importance of the livestock and processing industry business in Manitoba. As noted by the Agriculture Department and the Brandon Economic Development Board, this industry is of basic importance. The rendering of inedible meat by-products is an essential part of the infrastructure of the livestock and meat packing business. The meat processing plants at Brandon and Neepawa depend on a rendering operation and, if not sent to Brandon, the by-products would have to be shipped to Winnipeg for processing. The definitive impact of such a necessity on the economic viability of the Western Manitoba industry is not known. It is not even certain that there is sufficient surplus capacity in rendering operations in Winnipeg.

The Brandon rendering plant was established in what was at the time a rural area north of the City of Brandon before other present developments were established. The Trans-Canada highway Brandon by-pass was constructed in the late 1950's. A new crossing was built over the Assiniboine River at 18th Street around 1960. The development of 18th Street North as a commercial area was realized with the completion of the CPR overpass in 1967. The area was subsequently annexed to the City of Brandon from the Rural Municipality of Cornwallis.

It became apparent in the late 1960's and early 1970's that odors from the rendering plant were a problem. At that time, air pollution control measures at the rendering plant were minimal, added to which were odors originating from a process liquid waste handling system (lagoons). At that time in addition to the Brandon rendering operation, the Clean Environment Commission of that day was involved in a review of to the meat packing industry in Winnipeg, which was concentrated near the junction of Marion Street and Archibald Avenue in St. Boniface. The Commission held hearings in 1973 in Brandon and ordered that an odor limit of 7 odor units be met off the plant premises. Similar limits were also established for meat processors in Winnipeg. These limits were based on odor guidelines established by the Environment Department. The general objective or guideline for odor, which is

still in place, is 7 odor units in an industrial zone and 2 odor units in a residential zone.

It is evident that there was an investigation into the location of the rendering plant at the outset. Evidence at the 1973 Clean Environment Commission hearing showed that the location selected was approved by the Medical Officer of Health and the Environment Department, was permitted by the Rural Municipality of Cornwallis, and duly located in an industrially zoned location. Approval was a requirement of the Offensive Trade Regulation under the Public Health Act and normal municipal approval would also have been required. No joint City-Municipal planning district existed at that time. The perception probably was that the location was suitable partly because of its separation from near neighbors at that time.

Almost from the outset there have been odor problems associated with the Brandon rendering operation. Burns undertook some retrofitting in the late 1960's when the plant was purchased from Pool Packers. This likely resulted in some odor reduction. As a result of representations the Commission held hearings in 1973 after Burns acquired the plant. The outcome was a Commission order establishing odor limits off the plant premises which required the installation of a "state of the art" packed tower scrubber and the upgrading of the plant lagoons with drainage of excess flow to the City of Brandon sewage collection system.

It was reported at the current Clean Environment Commission hearing that odor complaints persisted throughout the years to the present. This is understandable since meat rendering odors are very objectionable and a limit of 7 odor units is all that has been stipulated. Over the years increasing numbers of people have come to live and do business close to the rendering operation. There is a restaurant 150 metres from the renderers; a major automobile dealership 200 metres distant; a campground and mobile home park 600 metres away; a major McDonald's Restaurant at 1.2 km and a major housing subdivision with less than 2 km separation.

From the fall of 1987, until mid July of 1988, the Environment Department received 20 complaints of odors. This increase was associated with an almost two fold increase in the volume of material handled by the renderer as a result of accepting waste from the Springhill Farms operation. At that time Burns made a decision to spend an estimated $250,000 principally for attempts to reduce the odors from the operation. These measures included cleaning the lagoons and temporarily retiring them; increasing and improving ventilation within the building and assuring that the building was under negative pressure with all exhaust air discharging through the packed tower scrubber; cleaning the yard and cleaning and painting the interior of the building; improving the maintenance of the scrubbing system and improving the blood cooking operation.

All of the representations at the current hearing either called for a major reduction of odor ("virtually odor free" or "no unacceptable odors") or the relocation of the plant. The views ranged from the City of Brandon representatives who suggested that the odor limit be reduced to 2 odor units ("if this is reasonable") to the view of the Brandon Chamber of Commerce who recommended that the operation be relocated (with financial assistance from government). Few conceded that there were not still objectionable odors and some stated that no significant improvement had been observed even with all of the improvements that have been made.

The Environment Department representative pointed out, based on monitoring experience, that the Company would likely have difficulty meeting an odor limit of 2 odor units and that given adverse meteorological conditions, an odor level of 2 would likely still be unacceptable to many of the business operators and residents in the vicinity of the plant.

SUMMARY AND RECOMMENDATIONS

Summary

Strong feelings were registered at the hearing concerning odors from the meat rendering operation at Brandon and a need for further regulation. The hearing was informed that Burns had expended a considerable sum of money this year undertaking renovations principally to control odors. Apart from a preliminary blood dewatering operation most of the changes had already been made. In the main, the neighbors were still not satisfied with the odor control.

The Chamber of Commerce, which represents the business sector of the Community, recommended that the rendering operation be relocated from the 18th Street site. This recommendations was accompanied by the suggestion that the various levels of government who benefit from this industry should contribute towards the cost of relocation.

The City expressed the view that an odor limit of "2" should be established "if this was reasonable". The Environment Departmental representative advised that an odor level of "2" would still result in complaints and concerns. Manitoba's objectives for various air pollutants prescribes a maximum desirable level for odor of less than 1.0 odor units, which is less than the odor threshold. The Environment Department representative stated that the Burns operation was employing "state of the art" technology and would have difficulty meeting consistently an odor limit of 2.0 odor units.

The Commission believes that the rendering plant was located in its present site at a time when this area was probably a logical and suitable location for such an operation. During the intervening years incompatible business operations and residential developments have established and expanded in the vicinity of the plant. The early formation of a planning district and close attention to zoning and development permits, in recognition of the

potential for the present land use conflict, might conceivably have prevented or delayed the present unsatisfactory situation.

Today the surrounding area is well developed and it now seems that further development in this now established commercial area, and nearby residential area, is inevitable. The continuing presence of the rendering plant may now be a serious impediment to the future development of the full potential of these very desirable commercial and residential areas of the City. In view of the undoubted importance of the rendering facility to the livestock industry of Western Manitoba, the Commission believes that the most satisfactory long term solution to the current situation is probably a relocation of the rendering plant with construction of a modern facility in a more suitable location.

The Commission concludes that a serious odor problem associated with the Brandon rendering operation currently exists and if the plant is to remain in operation at the present location a further reduction in the odor emission level will be necessary before the situation would be acceptable to the surrounding community. In view of the fact that Burns Foods Ltd. has stated its belief that the operation can be made "virtually odor free", the Commission believes that the Company should be given some reasonable time to assess the practicability of accomplishing this, to implement improvements, and to consider alternatives.

Recommendations

The Commission recommends that the Environment Act License for the Burns Food Ltd. Brandon rendering plant operation be revised to include the following:

1. The proponent shall not emit air contaminants into the ambient air from any part of the operation which cause odor outside the applicant's property line in excess of the following limits;

1. (i) Three odor units during the period up until June 30, 1989.

(ii) Two odor units during the period from July 1, 1989 up until June 30, 1990.

(iii) After July 1, 1990, one odor unit.

2. The applicant shall undertake an investigation by professionals knowledgeable in the field of air pollution control to determine that the packed tower scrubber along with the ancillary equipment is the "state of the art" technology for the industry and that the equipment is adequately sized. A copy of a report in this regard shall be forwarded to the Environmental Department by June 30, 1989.

3. The applicant shall not operate any process or process equipment when process equipment is out of repair and causing excess odorous air pollution.

4. The applicant shall take measures such that no vent, exhaust pipe, blow-off pipe with the exception of a plumbing stack shall discharge into the outside air any building air without first exhausting the said air through air pollution control equipment.

5. The applicant shall ensure that the ventilation system shall be such that the building shall normally be under a negative pressure when in operation.

6. The applicant shall ensure that odor producing materials shall be stored and handled in such a manner that odors produced from such materials are confined within the building space whereby odor from such materials is discharged through the air pollution control system.

7. The applicant shall ensure that any blood or offal spilled on the plant property is cleaned up immediately and in a thorough manner and the resulting material disposed of in a satisfactory manner.

8. The applicant shall ensure that chemicals used in the packed tower scrubber(s) are selected, maintained and applied in such a manner to ensure the maximum efficiency in the removal of the odorous gases.

9. The applicant shall ensure that the air pollution control system is maintained and operated in such a manner that the maximum efficiency in the removal of odorous gases is achieved.

10. The operator shall, in a manner satisfactory to the Director, maintain a daily log of measures taken to ensure maximum removal of odorous air from the plant which shall include but not be limited to maintenance of the packed tower and filter, chemicals used in the packed tower (including the kind, amount and measurements) and breakdown of equipment associated with air pollution control.

11. The applicant shall provide the Environment Department with the records as to the maintenance program, chemicals used and measurements of oxidizing agent residuals, and pH, and giving the time and duration of any process upsets or pollution control equipment breakdowns in a manner and with a frequency acceptable to the Director.

12. The applicant shall discontinue the use of the lagoons as a wastewater treatment and/or storage system.

13. The applicant shall ensure that general housekeeping and maintenance measures are of a standard that is acceptable to the Director.

14. This licence shall be reviewed at a public hearing on or about December 31, 1990.

APPENDIX A

BURNS FOODS INC., RENDERING PLANT File 249.1

LIST OF EXHIBITS

1. Honourable Ed Connery, Minister of Environment and Workplace Safety and Health, Memorandum, August 8, 1988.

2. Harvey Toews, Burns Foods Inc., Brief,

3. Ted Wilton, Wilton Mercury Sales, Brief, September 7, 1988.

4. Vern Gilbertson, Chairman, Brandon Chamber of Commerce, Brief, September 5, 1988.

5. Environment Act, Licence No. 331A, issued to Burns Foods Limited for the Brandon rendering plant.

6. Dave Pirt, City of Portage la Prairie, Brief, September 7, 1988.

7. Mr. Dave Paskewitz, Meadowlark Campground & Mobile Home Park, Brief.

8. Mr. Harry Malchuk, Harry's Ukrainian Kitchen, Brief.

9. Wayne K, Stewart, Mechanical Supervisor, Department of Highways & Transportation, Letter, September 6, 1988.

10. Springhill Farms Limited, Brief.

A P P E N D I X B

AN ORDER OF THE CLEAN ENVIRONMENT COMMISSION

UNDER THE CLEAN ENVIRONMENT ACT

RE: The Clean Environment Commission and Burns Food Limited, applicant

WHEREAS pursuant to the provisions of The Clean Environment Act, Burns Food Limited, 18th Street North, Brandon submitted an application to the Clean Environment Commission to prescribe limits in connection with the operation of an edible and inedible rendering and blood cooking process located on Lot 10/42 Plan 1134 (NE¼ 34-10-19W) Brandon, Manitoba,

AND WHEREAS representation was made to The Clean Environment Commission by persons who are or are likely to be affected by an Order of the Commission prescribing limits in connection with the said operation,

AND WHEREAS The Clean Environment Commission held a public hearing on the 19th day of February, 1973, in Brandon,

AND WHEREAS The Clean Environment Commission considered the application on the 11th day of June, 1973, and issued Order No. 331 on the 13th day of December, 1973,

AND WHEREAS on the 9th day of January, 1974, Burns Food Limited appealed Clause 6 (a) of the Order to the Minister responsible for The Clean Environment Act under Section 17(1) of the Act,

AND WHEREAS new evidence was presented to the Minister which was not considered at the public hearing of The Clean Environment Commission held on the 19th day of February, 1973,

AND WHEREAS the Minister decided to refer the matter to The Clean Environment Commission for its advice and recommendations,

AND WHEREAS The Clean Environment Commission held a public hearing to consider the matter on the 17th day of June, 1974, and tendered advice to the Minister on the 19th day of July, 1974,

AND WHEREAS The Clean Environment Commission was directed by the Minister to vary the Order to comply with the intent of Order-in-Council No. 1076 dated the 28th day of August, 1974,

IT IS HEREBY ORDERED THAT ORDER NO. 331 BE VARIED TO READ AS FOLLOWS

1. The applicant shall within twelve months of the date of issuance of this Order install and set in operation equipment and facilities to effectively reduce malodour emanating from inedible rendering cookers and/or blood driers,

2. The applicant shall ensure that:

   (a) gases and vapours discharged from inedible rendering cookers and/or blood driers to the air contain less than one hundred and fifty (150) odour units per standard cubic foot and that said gases and vapours are not diluted before measurement, except as required

      (i) to introduce combustion gases or chemical reactants necessary for odour abatement, or
      (ii) to assure gathering of said gases and vapours,

   (b) sampling points are provided in the exhaust system from the inedible rendering cookers and/or blood driers in conformity with the requirements of the Environmental Management Division of the Department of Mines, Resources and Environmental Management,

3. The applicant shall ensure that at any point of impingement off the plant premises the atmosphere shall contain less than seven(7) odour units per standard cubic foot, emanating from the said operation,

4. The applicant shall within six months of the date of issuance of this Order file with The Clean Environment Commission as evidence of intent and for the information of the Clean Environment Commission, a schedule of design, procurement, installation and setting in operation of equipment and facilities to meet the requirements of clauses 1, 2, and 3 of this Order,

The applicant shall ensure that:

   (a) all odour control and reduction equipment and facilities are maintained in sound operating condition and,

   (b) all odour control and reduction equipment and facilities are in operation whenever or however said cookers and/or dryers are in use,

6. The applicant shall ensure that:

   (a) within six months from the date that the municipal sewage collection system is available, the said operation is connected to this system and the on-site lagoon system for the purpose of waste treatment is restricted to the following processes:

      (i) a biological waste water treatment system for plant effluent, with final disposal of surplus to the municipal sewage system, and

      (ii) a reservoir for the storage, cooling and recycling of cooling water,

   (b) sewage pretreatment facilities shall be provided as may be required by the City of Brandon,

7. The applicant shall ensure that general housekeeping and maintenance measures are of a standard that will be compatable with meeting the requirements of clause 3 of this Order.

Order No. 331 As Varied

Chairman
Clean Environment Commission

Dated at the City of Winnipeg

this 20th day of September, 1974.

C-b-249.1